

METHOD AND APPARATUS FOR DIRECT FRAME SWITCHING
USING FRAME CONTAINED DESTINATION INFORMATION

ABSTRACT

Frame contained destination information may be used by a switch to identify an appropriate output port for a given frame without performing a table access operation. This reduces the processing requirements of the switch to enable the switch to handle frames more efficiently. The frame contained destination information may be contained in the frame's local destination MAC addresses (DA) such that a portion of the DA directly indicates, for each switch that handles the frame, an output port for that switch. Different portions of the DA may be used by different switches, depending on where they are in the network hierarchy. Large switches may also use sub-fields within their allocated portion in the DA to identify internal switching components. A location resolution server may be provided to store and distribute IP and MAC addresses and respond to local ARP requests on the local domain.